

Investigation Procedure Manual – Changes from previous manuals, November 2005

A. Changes/additions to the “General Information” section:

1. New section: **Pesticide Episode Tracking Log**. This section deals with pesticide episodes that do not get assigned priority episode numbers or WHS case numbers.
2. New sections under Jurisdiction:
 - a. **Federal Facilities**
 - b. **Tribal Lands**
 - c. **Cross-Jurisdictional Episode**
3. New section: **Investigative Plan**. Three subsections
 - a. Start Promptly
 - b. Formulate Plan
 - c. Amend the Plan

B. Changes/additions to the “Investigation Objectives and Procedures” section:

1. New section under Human Effects Episodes (General): **Assistance** (available from Worker Health and Safety Branch WHS)
2. New subsection under Specific Information to collect for human effects episodes: **Hazard Communication/Application Specific Information**.
3. New section: **Public Exposure Episode Involving Large Numbers of People**. DPR previously issued this as a letter ENF 2003-044.
4. **Episode Involving Antimicrobial Pesticides**: significantly simplified and revised. There is no longer a distinction of how to handle cases based on disability. This reflects how investigators have been handling these cases.
5. **Fatalities**: Expanded scope from “Agricultural Fatalities” to be more inclusive.
6. **Pest Control Equipment Accidents**: Expanded scope from “Aircraft Mishaps”
7. New section: **Drift**. DPR previously released this as a letter ENF 2000-034.
8. Priority Episode Investigations
 - a. Updated the criteria to reflect change made in the new USEPA/DPR/CACASA cooperative agreement.
 - b. New subsection: **Restricted Materials Used During a Priority Episode**.
9. New section: **Conducting Witness Interviews**. DPR included this information in the last County Agricultural Commissioner training in 2002.

C. Evidence Collection: This is a whole new section. Much of the information was previously found in the sampling manual.

1. Sample Collection
 - a. Gradient Pattern: Can collect less than 5 samples when appropriate
 - b. Surface Samples: Can use sharkskin.
 - c. Soil Samples: Change in sampling method.
 - d. Preservation: Added types of samples that may be frozen.
 - e. Added direction to ship frozen samples on dry ice.

2. New section: **Documentary Evidence Collection**. This section includes:
 - a. Diagrams
 - b. Photographs
 - c. Field Notes. This section includes a statement that interview questionnaires are not considered field notes.

D. The Investigative Report:

1. New section: **Report Writing**
2. New section: **Standard Narrative Format** (being required for episode investigations except for antimicrobials). Previously recommended this format in the 2002 training sessions.

E. Disposition of the Episode:

1. Significant revision of the **Records Request** section

F. Appendices:

1. Folded the “Flagger” questionnaire into the “Pesticide Handler” questionnaire.
2. Combined “Field Worker Exposed to Pesticide Residue” and “Field Worker Exposed to Pesticide Drift” questionnaires into “Field Worker Exposed to Pesticide (Drift or Residue)”

APPLICATION EQUIPMENT

Type of equipment used for an application regardless of who made the application.

Equipment Type	Definition
AERIAL APPLICATION EQUIPMENT	
FIXED WING AIRCRAFT	Fixed wing aircraft.
HELICOPTER	Helicopter.
AIR, OTHER OR UNSPECIFIED	Aerial application equipment, other or unspecified. This includes two or more types of aerial application equipment. The following equipment is excluded: 1) FIXED WING AIRCRAFT, and 2) HELICOPTERS.
GROUND APPLICATION EQUIPMENT	
GROUND BOOM, OTHER OR UNSPECIFIED	Ground application equipment with a spray boom. The following spray booms are excluded: 1) GROUND BOOM BELOW/BEHIND, 2) OVER-THE-VINE BOOM, and 3) ELECTROSTATIC SPRAYER.
GROUND BOOM BELOW/BEHIND	Ground application equipment with a spray boom located below and behind the equipment operator with the spray nozzles pointed downward.
OVER-THE-VINE BOOM	Ground operated equipment with the arms of the spray boom extending over the tops of grapevines.
ELECTROSTATIC SPRAYER	Ground operated equipment designed to impart an electrical charge to the pesticide particles. The electrostatic designation for ground application equipment overrides any other type of equipment it is used with.
AIRBLAST SPRAYERS	Ground application equipment with a pump that delivers the spray into an air stream created by a large fan at the back of the spray equipment.
POWER DUSTERS	Ground application equipment used to apply dust formulated pesticides.
SHANK INJECTION WITHOUT TARPS	Ground application equipment that uses a shank or other piece of equipment to directly apply a pesticide into the soil except when a tarp is placed over the soil, which is classified under SHANK INJECTION WITH TARPS. This also excludes surface applied pesticides that are subsequently incorporated into the soil by a cultivator.
SHANK INJECTION WITH TARPS	Ground application equipment that uses a shank or other piece of equipment to directly apply a pesticide into the soil and a tarp is placed over the soil to restrict the pesticide to the application site.
GROUND, OTHER OR UNSPECIFIED	Ground application equipment, unknown or unspecified. This includes two or more types of ground application equipment. The following equipment is excluded: 1) GROUND BOOM, OTHER OR UNSPECIFIED, 2) GROUND BOOM BELOW/BEHIND, 3) OVER-THE-VINE BOOM, 4) ELECTROSTATIC SPRAYER, 5) AIRBLAST SPRAYERS, 6) POWER DUSTERS, 7) SHANK INJECTION WITHOUT TARPS, and 8) SHANK INJECTION WITH TARPS.

Equipment Type	Definition
HAND APPLICATION EQUIPMENT	
PRESSURIZED HOSE-LINE SPRAYERS	Hand-held spray equipment attached by a long hose to a power-pressurized tank. This excludes hose-end sprayers which are classified under HAND, OTHER OR UNSPECIFIED.
HAND PUMP SPRAYER	Hand-held compressed air sprayer with small volume tanks (1 to 5 gallons). This excludes BACK PACK SPRAYERS.
HAND-HELD DUSTERS	Hand-held application equipment for granules or dust. This includes belly grinders, bellows, squeeze bulbs, etc.
BACK PACK SPRAYER	Compressed air sprayer where the tank is worn on the back of the applicator.
UNPRESSURIZED HAND-HELD SPRAY EQUIPMENT	Hand-held spray bottles (usually plastic) with built-in finger triggers.
AEROSOL CAN	Disposable pressurized cans designed for intermittent use. The pesticide is propelled out of the can by an inert compressed gas propellant. This excludes FOGGERS.
FOGGERS	Disposable pressurized cans designed for the total release of the contents in a single use. The pesticide is propelled out of the can by an inert compressed gas propellant.
AEROSOL/FOG GENERATING EQUIPMENT	Refillable application equipment designed to disperse pesticide as a small airborne droplet, either in confined spaces or outdoor areas. These include truck-mounted equipment for outdoor use, hand-carried portable units and wall mounted electric units that are found in dairies, restaurants, etc.
HAND, OTHER OR UNSPECIFIED	Hand-held application equipment, other or unspecified. The equipment must propel the pesticide from a reservoir. This includes 1) hose-end sprayers, and 2) two or more types of hand-held application equipment. This excludes: 1) PRESSURIZED HOSE-LINE SPRAYERS, 2) HAND PUMP SPRAYER, 3) HAND-HELD DUSTERS, 4) BACK PACK SPRAYER, 5) UNPRESSURIZED HAND-HELD SPRAY EQUIPMENT, 6) AEROSOL CAN, 7) FOGGERS, and 8) AEROSOL/FOG GENERATING EQUIPMENT.
OTHER TYPES OF MANUAL APPLICATION EQUIPMENT	
CHAMBER	An enclosed, sealed chamber designed specifically for treating the contents of the chamber. This includes chambers for fumigating agricultural commodities, pressure treatment of wood, and sterilization of medical/dental instruments and equipment.
TARP	Tarp placed over a commodity or structure and designed to restrict a fumigant to the application site.
AUTOMATIC EQUIPMENT, OTHER OR UNSPECIFIED	Equipment that automatically injects the pesticide to the target area. This includes equipment attached to milking machinery, dishwashers, etc. This excludes enclosed and sealed CHAMBERS, AUTOMATIC EQUIPMENT, CHLORINATORS, DRIP IRRIGATION EQUIPMENT, and SPRINKLER IRRIGATION EQUIPMENT.
AUTOMATIC EQUIPMENT, CHLORINATORS	Chlorination units that automatically inject chlorine into water for disinfection purposes. This includes chlorinators for swimming pools, packing houses and food processing plants.

Equipment Type	Definition
OTHER TYPES OF MANUAL APPLICATION EQUIPMENT	
DRIP IRRIGATION EQUIPMENT	Chemigation through drip irrigation equipment.
SPRINKLER IRRIGATION EQUIPMENT	Chemigation through sprinkler irrigation equipment.
MANUAL APPLICATION EQUIPMENT	
IMMERSION EQUIPMENT	Tanks, trays, sinks, etc. used for the dipping of animals, produce, bulbs, medical equipment, dishes, pots and pans, etc.
IMPLEMENTS WITH HANDLES	Mops, brushes, and other implements with handles.
IMPLEMENTS WITHOUT HANDLES	Cloths, towels, rags, sponges and other implements without handles.
MANUAL PLACEMENT	Manual placement of a pesticide directly to a target site. This includes bait stations, hand tossed pellets, and direct pouring of a pesticide onto a target surface from a container (such as pouring liquid chlorine directly into swimming pool water). This excludes the placement of fumigation pellet packs in CHAMBERS and under TARPS.
MANUAL APPLICATION METHODS, OTHER OR UNSPECIFIED	Manual application methods, other or unspecified. The pesticide is not propelled by any type of equipment. This includes two or more types of manual application methods. This excludes: 1) IMMERSION EQUIPMENT, 2) IMPLEMENTS WITH HANDLES, 3) IMPLEMENTS WITHOUT HANDLES, and 4) MANUAL PLACEMENT.
OTHER	
NOT APPLICABLE	No application equipment is involved.
OTHER	Any application methodology not described above. This includes the use of two or more types of application equipment that cannot be covered by any of the preceding codes. The application methodology is typically described in the comments.
UNKNOWN	The type of application equipment is not known.

1. Summary of Sampling Protocol

Communications Protocol: Discuss your sampling plan with your Enforcement Branch Liaison (EBL) prior to collecting any samples. Always contact your EBL before shipping samples to the lab. Fax a diagram of the sample sites and a copy of the data sheets to your EBL and be prepared to discuss the number and types of samples, the analyses being requested and the circumstances of the investigation. See page 32.

Sample Pattern: Investigative samples are collected in 9-point grid or 5-point gradient patterns. Single point samples are generally inadequate for enforcement purposes. Sampling plans other than grid or gradient must be discussed with the EBL prior to collection. See page 34.

Cross Contamination: Take precautions to prevent contamination. When gradient sampling, always sample the area of least contamination and work towards the treatment area. Wash or change tools and gloves between samples. Never store or ship tank mix or formulation samples with other samples. See pages 34 and 52.

Sample Size: A minimum of one pound of material per chemical or screen is necessary for the laboratory to analyze a sample. Samples submitted for analysis of more than one chemical require one pound of sample material per chemical. If samples are underweight, they may not be analyzed. (Exceptions: swab and dislodgeable samples). See page 39.

Sample Containers: Samples should be collected in previously unused paper bags or glass jars; sample material should never come in contact with metal or plastic. Metal lids for glass jars should be lined with aluminum foil or Teflon. Containers must be identified with the sample number. See page 39.

Swab Samples: Always swab a measured area (recommended 20 cm x 25 cm) and document the area size on the data sheet. Use two sterile gauze pads or sharkskin sheets. A control sample must always accompany swab samples. See page 41.

Storage: Refrigerate all samples; bring a cooler with blue ice into the field when collecting samples. Stored samples must be protected from tampering; protect the chain of custody. See page 53.

Shipping: After receiving approval from your EBL, ship samples to the assigned lab in a cooler with blue ice. Mark your cooler and blue ice with your address in indelible ink and they will be returned. Record the chain of custody. Pack data sheets in a separate plastic bag, (one data sheet per sample); if samples are wet or perishable, place paper bag in a plastic bag. Samples arriving at the lab without prior Department of Pesticide Regulation approval will be held until approval is given. Only use direct delivery courier services. See pages 32 and 54.